

What we claim is:

1. A method for treating a proliferative disease, said method comprising the step of administering, in at least one treatment, a therapeutically effective amount of an epothilone, together with a pharmaceutically acceptable carrier, to a warm-blooded animal in need of such treatment.

2. The method of claim 1 where the epothilone is epothilone B.

3. The method of claim 2 where epothilone B is administered in more than one treatment with an interval of about one week to about six weeks between treatments.

4. The method of claim 2 where epothilone B is administered in a dose to humans that is calculated according to the formula (I)

$$\text{single dose (mg/m}^2\text{)} = (0.1 \text{ to } y) \times N \quad (\text{I})$$

where N is the number of weeks between treatments and y is 6.

5. The method of claim 2 where epothilone B is administered in a dose to humans that is calculated according to the formula II

$$\text{single dose (mg/m}^2\text{)} = (0.1 \text{ to } 2.5) \times N \quad (\text{II}).$$

6. The method of claim 4 where epothilone B is administered weekly in a dose that is between about 0.1 and about 6 mg/m².

7. The method of claim 4 where epothilone B is administered every 6 to 8 days in a dose that is between about 0.1 and about 5 mg/m².

8. The method of claim 4 where epothilone B is administered every 6 to 8 days in a dose that is between about 0.1 and about 3 mg/m².

9. The method of claim 4 where epothilone B is administered every week in a dose between about 0.3 and about 1 mg/m².
10. The method of claim 4 where epothilone B is administered every third week in a dose that is between about 0.3 and about 18 mg/m².
11. The method of claim 4 where epothilone B is administered once every 18 to 24 days three weeks in a dose that is between about 0.3 and about 12 mg/m².
12. The method of claim 4 where epothilone B is administered every 18 to 24 days in a dose that is between about 0.3 and about 7.5 mg/m².
13. The method of claim 4 where epothilone B is administered every third week in a dose that is between about 1.0 and about 3.0 mg/m².
14. The method of claim 4 where epothilone B is administered by intravenous infusion.
15. The method of claim 6 where the epothilone is administered by intravenous infusion.
16. The method of claim 15 where each infusion takes place during about 5 to about 30 min.
17. The method of claim 10 where epothilone B is administered by intravenous infusion.
18. The method of claim 17 where the infusion takes place during about 5 to about 30 min.
19. The method of claim 1 wherein the proliferative disease is refractory to treatment with one or more chemotherapeutics other than an epothilone, where epothilone B is administered to a human in need of such treatment in a dose that is appropriate for the treatment of said disease.
20. The method of claim 19 where the refractory tumor to be treated is selected from the group consisting of lung, colorectal, prostate, breast or epidermoid head or neck tumors.

21. The method of claim 19, where the epothilone B is administered in more than on treatment with an interval between treatments of about one week to about six weeks after the preceding treatment, respectively.

22. The method of claim 19 where epothilone B is administered by intravenous infusion in a dose to humans that is calculated according to the formula (I)

$$\text{single dose (mg/m}^2\text{)} = (0.1 \text{ to } y) \times N \quad (I)$$

where N is the number of weeks between treatments which lies between about 1 and about 3 weeks so that N also is between about 1 and about 3, and y is 6.

23. The method of claim 22 where epothilone B is administered weekly in a dose that is between about 0.1 and about 6 mg/m².

24. The method of claim 22 where epothilone B is administered every 6 to 8 days in a dose that is between about 0.1 and about 5 mg/m².

25. The method of claim 22 where epothilone B is administered every 6 to 8 days in a dose that is between about 0.1 and about 3 mg/m².

26. The method of claim 22 where epothilone B is administered weekly in a dose between about 0.3 and about 1 mg/m².

27. The method of claim 22 where epothilone B is administered every third week in a dose that is between about 0.3 and about 18 mg/m².

28. The method of claim 22 where epothilone B is administered every 18 to 24 days in a dose that is between about 0.3 and about 12 mg/m².

29. The method of claim 22 where epothilone B is administered every 18 to 24 days in a dose that is between about 0.3 and about 7.5 mg/m².

30. The method of claim 22 where epothilone B is administered every third week in a dose that is between about 1.0 and about 3.0 mg/m².

31. The method of claim 22 where the infusion takes place during about 5 to about 30 min.

32. The method of claim 22 wherein the tumor to be treated is a colorectal tumor that is refractory to at least one member of the taxane class of anti-cancer agents.

33. The method according to claim 32 wherein the colorectal tumor to be treated is in addition refractory to at least one other standard chemotherapeutic.

34. The method of claim 33 where the tumor to be treated is a colorectal tumor that is refractory to TAXOL and 5-fluorouracil treatment.

35. The method of claim 22 where the tumor to be treated is a prostate tumor, and/or any metastasis, refractory to hormone treatment.

36. The method of claim 22 where the tumor to be treated is an epidermoid head or neck tumor that is refractory to treatment with at least one other chemotherapeutic.

37. The method of claim 36 where the epidermoid head or neck tumor is refractory to treatment with TAXOL.

38. The method of claim 22, where the tumor to be treated is a lung tumor that is refractory to treatment with at least one other chemotherapeutic.

39. The method of claim 38 where the tumor to be treated is a non-small cell lung cancer.

40. The method of claim 39 where the non-small cell lung cancer is refractory to treatment with TAXOL.

41. The method of claim 22 where the tumor to be treated is a breast tumor.

42. The method of claim 31 wherein the tumor to be treated is a colorectal tumor that is refractory to at least one member of the taxane class of anti-cancer agents.

43. The method of claim 42 wherein the tumor to be treated is a colorectal tumor that is refractory to standard chemotherapy.

44. The method of claim 43 where the tumor to be treated is a colorectal tumor that is refractory to TAXOL and 5-fluorouracil treatment.

45. The method of claim 31 where the tumor to be treated is a prostate tumor, and/or any metastasis thereof, wherein the tumor and/or its metastasis is refractory to hormone treatment.

46. The method of claim 31 where the tumor to be treated is an epidermoid head or neck tumor refractory to treatment with at least one other chemotherapeutic due to multi-drug resistance.

47. The method of claim 46 where the epidermoid head or neck tumor is refractory to treatment with TAXOL.

48. The method of claim 31, where the tumor to be treated is a lung tumor that is refractory to treatment with at least one other chemotherapeutic.

49. The method of claim 48 where the tumor to be treated is a non-small cell lung cancer.

50. The method of claim 49 where the non-small cell lung cancer is refractory to treatment with TAXOL®.

51. The method of claim 31 where the tumor to be treated is a breast tumor.

52. The method of claim 2 where the proliferative disease to be treated is selected from the group consisting of a colorectal tumor, a tumor of the genitourinary tract, an epidermoid tumor, a lung tumor and a breast tumor.

53. The method of claim 52 where the proliferative disease to be treated is a colorectal tumor that is refractory to at least one member of the taxane class of anti/cancer agents and/or to standard chemotherapy.

54. The method of claim 52 where the proliferative disease to be treated is a prostate tumor.

55. The method of claim 54 where the prostate tumor is refractory to hormone treatment.

56. The method of claim 52 where the proliferative disease is an epidermoid head or neck tumor.

57. The method of claim 56 where the head or neck tumor is multidrug-resistant.

58. The method according to claim 52 where the proliferative disease is a non-small cell lung tumor.

59. The method of claim 58 where the non-small cell lung tumor is refractory to treatment with a member of the taxane class of anti-cancer agents.

60. The method of claim 52 where the proliferative disease is a breast tumor.

61. The method of claim 60 where the breast tumor is refractory to treatment with at least one member of the taxane class of anti-cancer agents.

62. The method of claim 1 where the proliferative disease to be treated is a multidrug resistant tumor.

63. The method of claim 1 where the proliferative disease to be treated is selected from the group consisting of a melanoma, ovarian cancer, pancreas cancer, neuroblastoma, head or neck cancer, bladder cancer, renal cancer, brain cancer and gastric cancer.

64. The method of claim 19, where epothilone B is administered in a dose that is between about 1 and about 100% of the maximal tolerated dose (MTD) to a human; and one or more further doses each within 1% and 100% of the MTD are administered in at least one additional treatment after an interval between the treatments of one to three weeks.

65. The method of claim 64 where the dose to be administered is between 25 and 100 % of the MTD.

66. The method of claim 19, where epothilone B is administered weekly to a human in a dose that is below 80% of the maximal tolerable dose (MTD).

67. The method of claim 66, where the dose is below 50% of the MTD.

68. The method of claim 1, further comprising the step of administering (a) epothilone B in combination with (b) another antitumor therapeutic, the combined treatment being so timed

that component (a) and component (b) are administered to a human in need of such treatment in combination and in a quantity that is jointly therapeutically effective against said proliferative disease.

69. The method of claim 2, where the proliferative disease is a tumor that is refractory to the treatment with an anti-cancer agent of the taxane class, said tumor being selected from the group consisting of a colorectal, a prostatic, a pancreatic and a brain tumor.

70. The method of claim 2 where the proliferative disease is a multidrug resistant non-small cell lung carcinoma, a multidrug resistant breast tumor, or a multidrug resistant epidermoid head and neck tumor.

71. The use of an epothilone for the manufacture of a pharmaceutical preparation for the treatment of a proliferative disease, comprising admixing said epothilone with a pharmaceutically acceptable carrier.

72. The use of claim 71, where the epothilone is epothilone B.